

WIDENING JOINTS

Once regarded as the only way of obtaining wide panels made from solid timber. These wide panels were required for _____ also door and wall panelling.

Modern "flat panel products" have reduced the need for _____. However some areas in the industry are having a revival of "colonial" designed fitments requiring solid timber panel components. E.g. kitchen cupboards and counter units etc.

Definition. Widening joints are used to _____

Panel Joints:

Most solid timber panels require _____ to achieve a wide panel.

Always [wear the appropriate PPE](#) when selecting and machining timber

When selecting timber for panels, be sure to:

- a. Select timber that is _____
- b. For the best results use timber that _____

Machining the material:

Dress a _____ and then dress _____ ([see jointer notes](#))

Apply the correct marks for establishing face sides and edges.

The selection of the type of joint to use will be dependant upon _____ you have available, the _____ that are available and the ability to finish the panels

Types

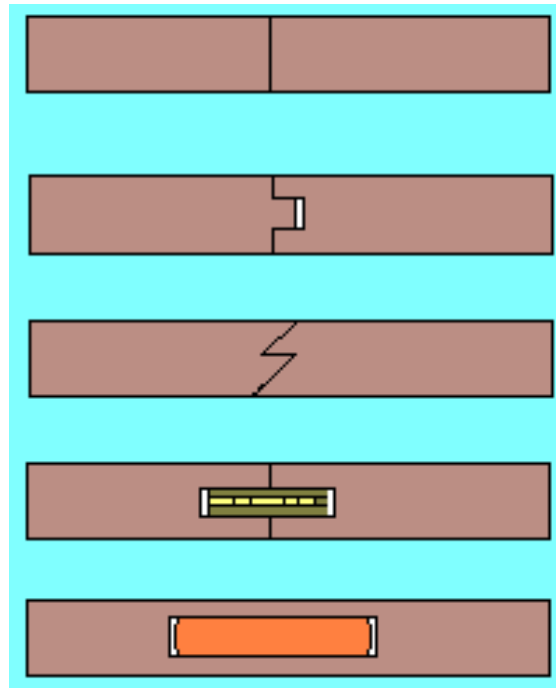
1. **Butt Joint** - Boards joined using this joint must have edges _____ then glued and cramped.

2. **Tongue and Groove Joint** - (matched joint) A groove is run on one piece and a matching groove is run on the other. This joint must be glued and cramped.

3. **Machine Joint** – an angled profile is run on each edge of the boards. Being angle the, under pressure the joints closes upon itself.

4. **Loose Tongue and Groove** - Prepared as _____ then a groove is run in both edges to be joined. A loose tongue is inserted _____ into the joint which is glued and cramped.11

5. **Dowel Joint** - Prepared as for butt joint. Dowels are inserted at regular intervals along the joint. The boards are glued and cramped. _____



The Butt joint



The tongue & groove joint


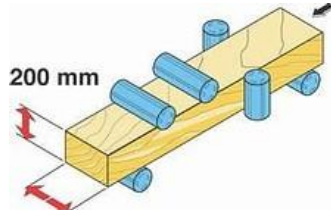


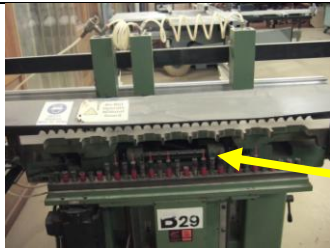
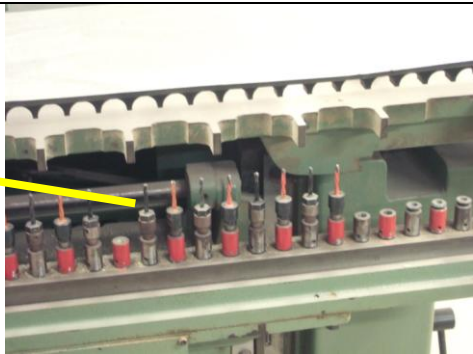
The machine joint or lightening joint

The loose tongue & groove joint

The dowel joint

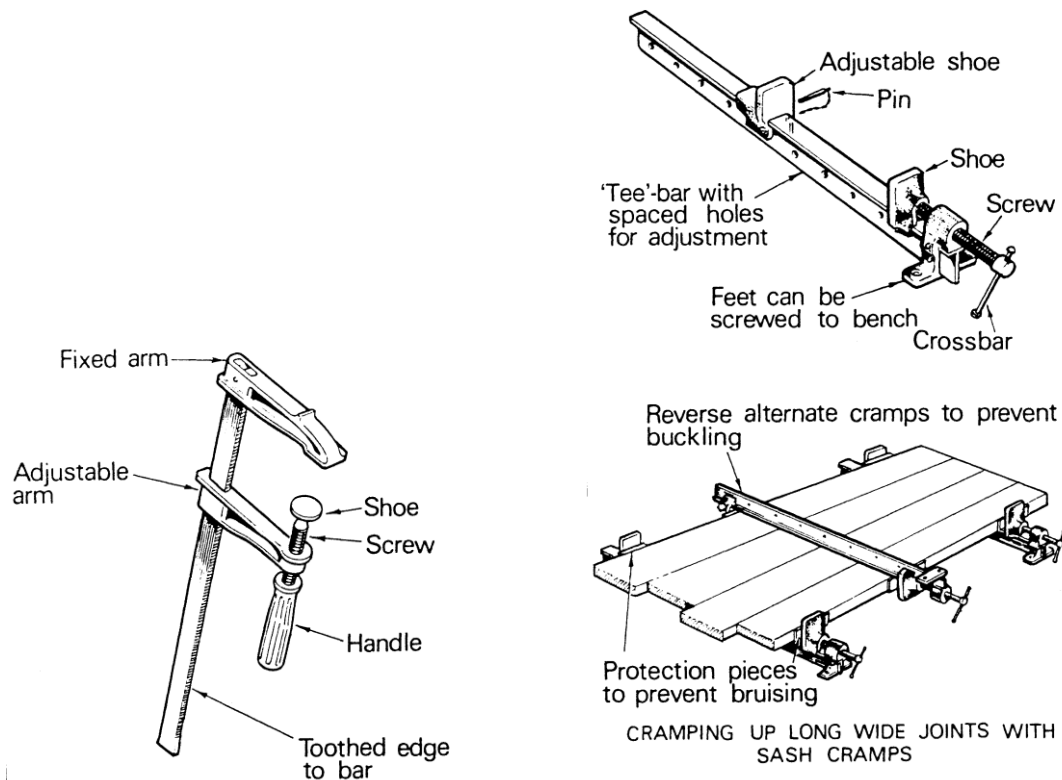
Machines available for use:

| <i>Machine</i> | <i>Use</i> |
|----------------|---|
| Jointer | <p>Dressing face sides and edges</p>  |
| Thicknesser | <p>Machining timber to width and thickness</p>  |

| | |
|------------------------------------|--|
| <p>Square dresser (header)</p> | <p>Machines all four sides in one operation</p> <div data-bbox="485 342 847 517">  </div> <p>Figure 1 SCM Topset machine</p> <div data-bbox="963 309 1294 517">  </div> <p>Figure 2 cutter head configuration</p> |
| <p>Spindle moulder</p> | <p>For machining edge joints</p> <div data-bbox="676 689 1147 1041">  </div> |
| <p>Wide belt sander</p> | <p>for flushing and finishing panels after assembly</p> <div data-bbox="635 1149 1190 1471">  </div> |
| <p>Multi borer</p> | <div data-bbox="469 1581 799 1827">  </div> <div data-bbox="850 1581 1324 1933">  </div> |

Clamping Systems:

For small runs you may choose to use _____ to bring the joints together. Remember to use _____ and have _____ to remove excess adhesive.



Applying adhesives

Once component are measured, prepared and located for assembly, you will need to secure them. Adhesives are applied to the joints of some components before they are held in place. The drawings or specifications will show if adhesives are to be applied before the components are braced together.

Note

Before assembling your joint, prepare all the necessary equipment such as:

By doing this first, you will have everything you need and can concentrate on the assembly process. You will also avoid adhesives drying too quickly.

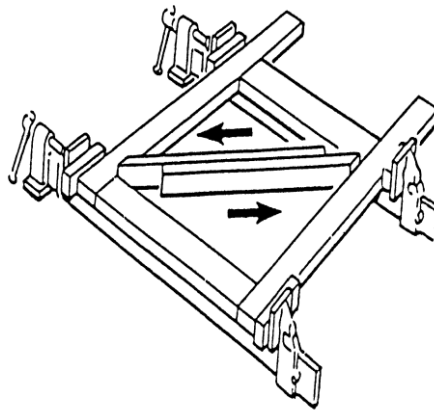
Checking the joints and assembly

Before the components are permanently fixed in position you will need to check that the:

Check the assembly for the following.

Squareness

This is achieved by _____ with a rule, tape or pinch rod from an inside corner to the opposite inside corner. If this diagonal measurement is the same as the opposite diagonal then the assembly is square.

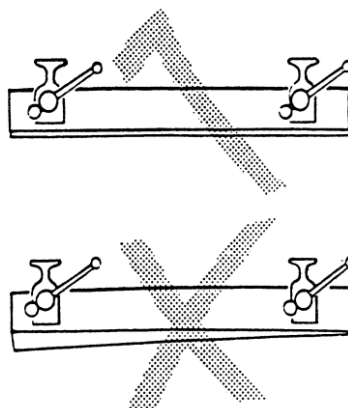


Parallel

The assembly is the same distance apart at opposing ends or sides. This is generally applied to leg and rail assemblies.

Twist

This condition can be checked by _____ to determine if these parts are on the same plane of reference. You should endeavour to start working off a level and an uncluttered surface.



Straight

This condition fails to occur when inappropriate cramping blocks are used or by distortion of components through over tightening of sash clamps. Sometimes problems can also occur when a damaged sash cramp is used. Use a _____ to check the assembly for straight.

More information on joints and making joints can be found at the following websites:
<http://year1shopfitting.wikispaces.com/Basic+Joints>